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 TI Fatigue-resistant steel sheets for materials which undergo blanking  
 IN Hasegawa, Morihiro; Hiramatsu, Akifumi; Iihara, Katsuyuki; Omosako, Koji;  
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 PA Nisshin Steel Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
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AB The steel sheets contain C 0.3-0.8, Si  $\leq$ 3.0,  
 Mn  $\leq$ 1.5, Cr  $\leq$ 2.0, Cu  
 $\leq$ 0.5, N 0.0005-0.02, O 0.0005-0.01, P  $\leq$ 0.02, S  $\leq$ 0.01,  
 acid-soluble Al 0.01-0.1 weight%, and balance Fe and show the  
 spheroidization rate of carbides 50-95%, average size of spheroidal carbides  
 $\leq$ 0.3  $\mu$ m, and hardness 200-400 HV. The steel sheets may also  
 contain Mo 0.1-2.0, Ni 0.1-3.0, V 0.01-0.5, Ti  
 0.01-0.1, Nb 0.01-0.2, and/or B 0.0005-0.01 weight%. The steel sheets show  
 good fatigue resistance even after blanking and refining to have hardness  
 $\geq$ 45 HRC (Rockwell C hardness), and are useful for  
 machinery parts, etc.